

Abstract of the Disclosure

Embodiments of the invention include a method for making optical fibers that have reduced aging loss, hydrogen aging and other losses over the life of the fiber, and optical systems including such optical fibers. Improved conditions in fiber 5 manufacturing environments are provided to reduce the likelihood of generating defects in optical fiber preforms that, in optical fiber drawn therefrom, attract and bond with hydrogen atoms to form molecules that increase transmission loss in the fiber. The improved conditions include the establishment and adjustment of the oxygen stoichiometry in one or more of the environments in which optical fiber 10 manufacturing process steps occur. Optical fiber made by methods according to embodiments of the invention have improved transmission characteristics, e.g., transmission loss at 1385 nanometers that is less than 0.33 dB/km and the change in transmission loss thereafter is less than 0.05 dB/km.

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